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NOTES ON GEOGRAPHIC DISTRIBUTION

Pecluma recurvata (Kaulf.) M.G. Price (Polypodiopsida: Polypodiaceae): Distribution extension in Atlantic Forest, Brazil

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ABSTRACT: *Pecluma recurvata* (Kaulf.) M. G. Price has been recorded in Argentina, Paraguay and Brazil (Atlantic Forest). Our work further extends the distribution of *P. recurvata* to northeastern Atlantic Forest in Brazil, in state of Pernambuco, representing a range extension of ca. 880 Km north.

The genus *Pecluma* M. G. Price comprises terrestrial, epiphytic or epilithic ferns, usually medium-sized. The genus comprises of around 30 species in the warmer parts of the New World, from Florida to northern Argentina, with a unique set of characteristics: a short-creeping stem, basally attached scales, pectinate leaves, sterile lamina parts with uniquely shaped acicular cells beside multicellular branched or unbranched glandular hairs (Price 1983; Hennipman *et al.* 1990; Moran 1995).

Pecluma recurvata (Kaulf.) M. G. Price was previously recorded in Brazil in just some of the Brazilian coastal states with Atlantic Forest (Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, and Rio Grande do Sul) (Evans 1969; Labiak and Hirai 2012). However, during a recent survey in northeastern Atlantic Forest, which include the remnants of Atlantic Forest located north of the São Francisco River, (between the states of Alagoas until Rio Grande do Norte) (Tabarelli *et al*. 2006), *Pecluma recurvata* (Figure 1) was recorded in the Serra Negra, a piece of forest called locally "Brejo de altitude" (ca. 850m a.s.l.) located in the Bezerros Municipality (08°14'00" S, 35°47'49" W), in the state of Pernambuco. The term "Brejos de Altitude" is applied for the remnants of northeastern Atlantic Forest, above 500 m a.s.l., within the Caatinga domain (Prance 1982).

Pecluma recurvata (Kaulf.) M.G. Price, Amer. Fern. J. 73: 115. 1983.

Rhizome long-creeping, 5-8 mm diam., scales with narrow-triangular, light red-brow, non-lustrous, basifixed or basally cordate, margins papillate; Fronds 55-57 cm long, spaced ca. 0,5 cm or less apart on the rhizome; Stipe 11-16 cm long, red-brow, with acicular hairs; Blades narrow-triangular; Rachis red-brow; Segments 3-6 cm long, 3-5 mm wide, perpendicular or slightly ascending to

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CENTRO DE CIÊNCIAS BIOLÓGICAS
LABORATÓRIO DE PTERIDÓFITAS
Polypodiaceae
Pecluma recurvata (Kaulf) M.G. Price
Loc.: Brasil – Estado de Pernambuco, Munic. de Bezerros, Serra Negra de Bezerros. Localidade: Serra Velha.
Hab.: Rupícola. No interior da Mata em encosta.
Col: Augusto Santiago 757, Marcio Pietrobom, Sergio Xavier & Felipe Lira
Data: 06.05.2004
Det: A. Santiago
Apoio: FUNDAÇÃO O BOTICÁRIO DE PROTEÇÃO À NATUREZA

FIGURE 1. Specimen of *Pecluma recurvata* (Kaulf.) M.G. Price, collected in Serra Negra, Bezerros (Pernambuco, Brazil). UFP 57264 (Santiago et al. 757).

the rachis; Lamina glabrous; Costa perpendicular to the rachis, with scattered short trichomes; Veins 2(3)-forked, free; Sori medial, round, with paraphyses; Sporangia without or with 1 capsular setae.

Material examined: Pernambuco: Bezerros, Serra Negra de Bezerros, Serra Velha (08°11'09" S, 35°47'26" W), A. Santiago *et al*. 757, 06/V/2004 (UFP 57264); idem, Mata do Boqueirão (08°09'38" S, 35°49'00" W), A. Santiago *et al.* 885 23/VIII/2004 (UFP 57265).

Habitat: epipetric in the edge of the forest, at ca. 850 s.l.

Barros *et al.* (2004) studied the genus in the northernmost portion of the Atlantic Forest in Brazil, finding seven species. However *P. recurvata* was not mentioned, nor was reported in the recent list of the Brazilian flora (Labiak and Hirai 2012). According to Evans (1969), this species can be characterized by the frond greater than 40 cm, the gray-green foliage, long-acuminate segments, strongly truncate blade and veins 2 or 3-furcate. *Pecluma recurvata* is a close relative to *Pecluma higrometrica* (Splitg.) M.G. Price, but the second species can be distinguished by the only once-forked veins, the obtuse segments and the frond generally smaller than 40 cm (Evans 1969).

Having being record in the state of Pernambuco a wider search was carried out in order to more accurately assess the geographical distribution of *P. recurvata*. Some authors refer the occurrence of *P. recurvata* in the Pará State, without examined specimens (Sampaio 1930; Sehnem 1970). We did not find any record of this species in the major Amazonian herbaria (HAMAB, IAN, INPA, MG, UFAC, UFRR, acronyms according Thiers 2010).

Matos *et al.* (2010) reported *P. recurvata* for the RPPN Serra Bonita in the municipality of Camacan, in the state of Bahia. We consider this the northernmost known locality for this species. Evans (1969) also refers to the species in "Toca de Onca", also in Bahia, but the municipality was not mentioned. The new reports extend the geographical distribution of *P. recuvata* in *ca*. 880km N, inside the Atlantic Forest domain (Figure 2). This study reinforces the importance of the "Brejos de Altitude" in the composition of the fern flora in northeastern Atlantic Forest, Brazil. This fact have been pointed out by other authors who recorded the presence of various ferns species restricted to this regional environment (Pietrobom and Barros 2003; Santiago *et al.* 2004; Xavier & Barros 2005). The same authors also highlight the threat to these environments due to the lack of conservation units at these sites or through the failure of implementing these units.

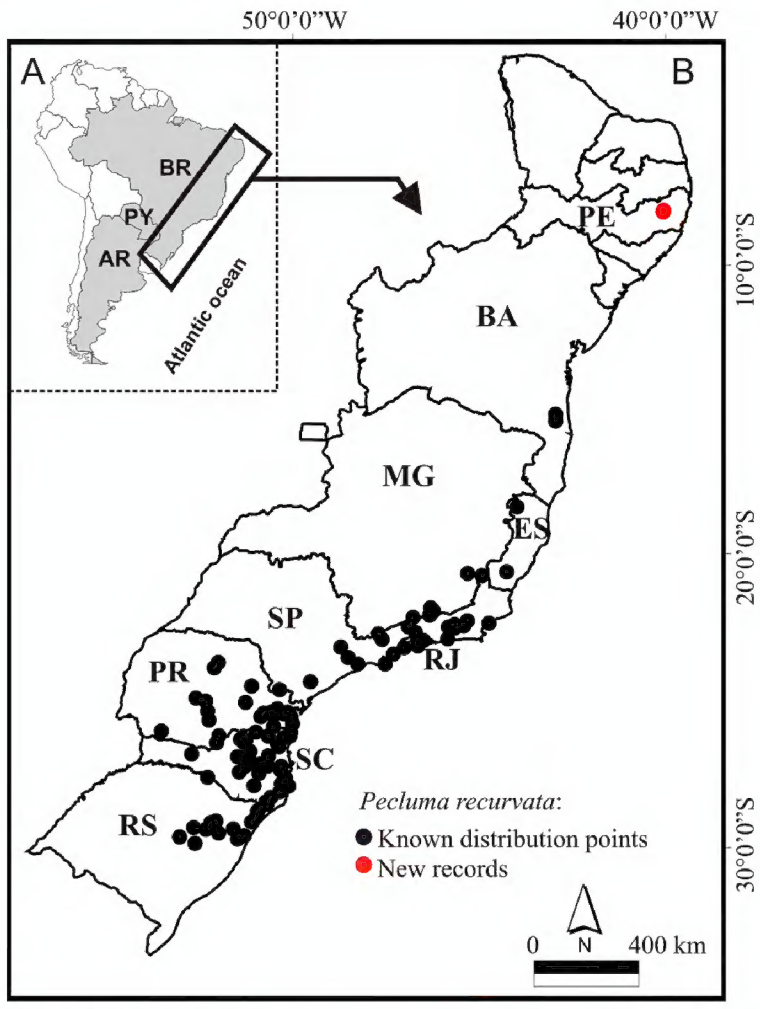

Figure 2. Distribution of *Pecluma recurvata* (Kaulf.) M.G. Price. A – Countries where the species occurs. B - Distribution in Brazil*, the red circles represents the new record (Bezerros, Pernambuco). * Based on records shown by *speciesLink* Project - http://splink.cria.org.br.

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